

IN THE CLAIMS:

~~1 - 42. (Cancelled)~~

Sub B' 7  
~~43. (New) A memory medium comprising program instructions for configuring a graphical user interface (GUI) element to subscribe to data source, wherein the program instructions are executable to implement:~~

~~receiving user input specifying a data source, wherein the user input is received to a program development environment during creation of a program;~~

~~programmatically selecting a GUI element after receiving the user input, wherein the GUI element is selected based on a data type of data provided by the data source;~~

~~displaying the selected GUI element in the program after said programmatically selecting; and~~

~~programmatically configuring the GUI element to receive and display data from the specified data source.~~

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~~44. (New) The memory medium of claim 43, wherein the GUI element is programmatically configured without user input specifying source code for this operation~~

~~45. (New) The memory medium of claim 43,  
wherein said receiving user input specifying a data source comprises receiving user input specifying a uniform resource locator (URL) of the data source.~~

~~46. (New) The memory medium of claim 45,  
wherein said programmatically selecting a GUI element comprises programmatically determining the GUI element based on one or more of: 1) a protocol specified by the URL; and 2) a file extension specified by the URL.~~

47. (New) The memory medium of claim 43, wherein said programmatically selecting a GUI element comprises:

receiving data from the data source;

programmatically analyzing the received data; and

programmatically determining a GUI element operable to display the received data.

48. (New) The memory medium of claim 47,

wherein the data is received in a self-describing format;

wherein said programmatically determining a GUI element operable to display the received data comprises programmatically determining a GUI element operable to display data of the self-described format.

49. (New) The memory medium of claim 43,

wherein the memory medium is comprised in a first computer;

wherein the data source is comprised in a second computer remotely located from the first computer, wherein the first computer is operable to connect to the second computer over a network;

wherein said programmatically configuring the GUI element comprises programmatically configuring the GUI element to connect to the second computer and receive and display data from the specified data source.

50. (New) The memory medium of claim 43,

wherein said displaying the GUI element comprises automatically including the GUI element in a user interface associated with the program.

51. (New) The memory medium of claim 43,

wherein the program is a graphical program, wherein the graphical program comprises a block diagram and a user interface;

wherein the block diagram comprises a plurality of connected nodes which visually indicate functionality of the graphical program;

wherein the user interface includes the GUI element.

52. (New) The memory medium of claim 43, wherein the data source is one from the group consisting of:

an HTTP server;  
an FTP server;  
an OPC server;  
an SNMP server;  
a DataSocket server; and  
a file.

53. (New) The memory medium of claim 43,  
wherein said user input specifies both a data source and a data target with which to associate the GUI element

wherein said programmatically configuring comprises programmatically configuring the GUI element to: 1) receive and display data from the specified data source; and 2) publish data associated with the GUI element to the specified data target.

54. (New) The memory medium of claim 53, wherein the specified data source is the same as the specified data target.

55. (New) The memory medium of claim 43, wherein the data is live data.

56. (New) The memory medium of claim 43,  
wherein the data comprises measurement data received from an instrument.

57. (New) A memory medium comprising program instructions for configuring a program to display data, wherein the program instructions are executable to implement:

receiving user input during development of the program specifying a data source, wherein the program comprises a user interface, wherein the user input is received by the user interface;

programmatically determining a graphical user interface (GUI) element operable to display data from the specified data source, in response to the user input, wherein said programmatically determining operates to determine the GUI element based on a data type of data provided by the specified data source;

programmatically including the GUI element in the user interface of the program;

programmatically configuring the program to receive and display data from the specified data source in the GUI element during program execution.

58. (New) A memory medium comprising program instructions for configuring a graphical program to display data, wherein the program instructions are executable to implement:

receiving user input during development of the graphical program specifying a data source, wherein the graphical program comprises a block diagram and a user interface panel, wherein the block diagram comprises a plurality of connected nodes which visually indicate functionality of the graphical program, wherein the user input is received by the user interface panel;

programmatically determining a graphical user interface (GUI) element operable to display data from the specified data source, in response to the user input, wherein said programmatically determining operates to determine the GUI element based on a data type of data provided by the specified data source;

programmatically including the GUI element in the user interface panel of the graphical program;

programmatically configuring the graphical program to receive and display data from the specified data source in the GUI element during program execution.

59. (New) A system for configuring a graphical user interface (GUI) element to publish or subscribe to a data target or data source, respectively, the system comprising:  
a display device;

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a processor;  
a memory medium coupled to the processor, wherein the memory medium stores a first program;  
wherein the processor is operable to execute the first program to:  
receive user input specifying a data source;  
programmatically select a GUI element after receiving the user input,  
wherein the GUI element is selected based on a data type of the data source;  
display the selected GUI element in the program after said programmatically selecting; and  
programmatically configure the GUI element to receive and display data from the specified data source.

60. (New) A method for configuring a graphical user interface (GUI) element to publish and subscribe to data, the method comprising:

receiving user input specifying a data source and data target, wherein the data source and data target are the same;

programmatically selecting a GUI element after receiving the user input, wherein the GUI element is selected based on a data type of the data source and data target;

displaying the selected GUI element in the program after said programmatically selecting; and

programmatically configuring the GUI element to receive and display data from the specified data source and publish data to the specified data target.